DRONACHARYA
College of Engineering
Khentawas, Farrukh Nagar, Gurugram, Haryana
Approved by: All India Council for Technical Education (AICTE), New Delhi
Affiliated to: Gurugram University, Gurugram

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023-24

SEMESTER VIII

INDUSTRIAL AUTOMATION (PCC-ME-402G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	practical exposure of Automation Industry has been propelling economies internationally by enabling manufacturing and infrastructure to meet the growing needs across the globe. This cross disciplinary segment is the key to enhanced productivity, reliability and quality in multiple domains .

TOOL DESIGN (PEC-ME-402G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	understand tool design concept and how to increase production while maintaining quality and lowering costs.

PLANT MAINTENANCE ENGG (PEC-ME-404G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To enable the student to understand the principles, functions and practices adapted in industry for the successful management of maintenance activities.
(CO2)	To explain the different maintenance categories like Preventive maintenance, condition monitoring and repair of machine elements.
(CO3)	To illustrate some of the simple instruments used for condition monitoring in industry.

Design And Optimization Of Thermal Energy Systems (PEC-ME-406G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	understand modeling and optimization of Thermal systems.

GAS DYNAMICS AND JET PROPULSION (PEC-ME-408G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	apply gas dynamics principles to jet and space propulsion systems

POWER PLANT ENGINEERING (PEC-ME-412G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand the principles of steam power plants and gas power plants.
(CO2)	Utility and applications of nuclear power plant.
(CO3)	Installation and commissioning of hydro-electric power plants.
(CO4)	Understand various factors affecting non-conventional power plant.
(CO5)	understand the principles of operation for different power plants and their economics.

PRODUCT DESIGN AND DEVELOPMENT (PEC-ME-414G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	to understand how product development is to cultivate, maintain and increase a company's market share by satisfying a consumer demand. They know, how quantitative market research should be conducted at all phases of the design process, including before the product or

	service is conceived, while the product is being designed and after the product has been launched.

NON CONVENTIONAL ENERGY RESOURCES UTILIZATION (PEC-ME-416G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	understanding of fuel is to store energy, which should be in a stable form and can be easily transported to the place of use. The user employs this fuel to generate heat or perform mechanical work, such as powering an engine. It may also be used to ge nerate electricity, which is then used for heating, lighting, or other purposes.

INTRODUCTION TO NANOSCIENCE AND NANOTECHNOLOGY (PEC-ME-418G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand properties of materials at nanoscale
(CO2)	Know the fabrication and characterization methods used in nanotechnology
(CO3)	Acquaint with the various applications of nanotechnology.

AUTOMOBILE ENGINEERING (PEC-ME-420G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Identify the different parts of the automobile
(CO2)	Explain the working of various parts like engine, transmission, clutch, brakes.
(CO3)	Describe how the steering and the suspension systems operate.
(CO4)	Understand the environmental implications of automobile emissions.
(CO5)	Understand the function of each automobile component and also have a clear idea about the overall vehicle performance.
(CO6)	Develop a strong base for understanding future developments

DESIGN OF TRANSMISSION SYSTEMS (PEC-ME-422G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	design transmission systems for engines and machines.

ALTERNATE FUELS AND ENERGY SYSTEMS (PEC-ME-424G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	understand how the fuel is to store energy, which should be in a stable form and can be easily transported to the place of use. Almost all fuels are chemical fuels. The user employs this fuel to generate heat or perform mechanical work, such as powering an engine. It may also be used to generate electricity, which is then used for heating, lighting, or other purposes.

OPTIMISATION FOR ENGINEERING DESIGN (PEC-ME-426G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	understanding while engineering design problems can often be conveniently formulated as multi objective optimization problems, these often comprise a relatively large number of objectives. Such problems pose new challenges for algorithm design, visualisation and implementation..

OPERATIONS RESEARCH (OEC –ME-402G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Discuss the role of operations research in decision-making, and its applications in industry and should be able to formulate and design real-world problems through models & experiments.
(CO2)	Knowledge of various types of deterministic models like linear programming, transportation model etc.
(CO3)	Explore various types of stochastic models like waiting line model, project line model, simulation etc.
(CO4)	Deduce the relationship between a linear program and its dual and perform sensitivity analysis

(CO5)	Describe different decision making environments and apply decision making process in the real world situations

QUALITY ENGINEERING (OEC-ME-410G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Attain the basic techniques of quality improvement, fundamental knowledge of statistics and probability
(CO2)	Use control charts to analyze for improving the process quality.
(CO3)	Describe different sampling plans
(CO4)	Acquire basic knowledge of total quality management
(CO5)	Understand the modern quality management techniques

ELECTRICAL POWER GENERATION (OEC –EE-412G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	The knowledge about power generation and its related issues.

COMPUTER COMMUNICATION (OEC-CSE-430G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Independently understand basic computer network technology.
(CO2)	Understand and explain Data Communications System and its components.
(CO3)	Identify the different types of network topologies and protocols.
(CO4)	Enumerate the layers of the OSI model and TCP/IP. Explain the function(s) of each layer.
(CO5)	Identify the different types of network devices and their functions within a network

Traffic Engineering and Road Safety (OEC-CE- 448G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To realize the significance of traffic engineering in today life.
(CO2)	To understand the processes involved in traffic studies.
(CO3)	To appreciate the role of Traffic regulations.

Disaster Management (OEC-CE- 450G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To know natural as well as manmade disaster and their extent and possible effects on the economy
(CO2)	To Plan national importance structures based upon the previous history.
(CO3)	To acquaint with government policies, acts and various organizational structures associated with an emergency.
(CO4)	To know the simple dos and don‟ts in such extreme events and act accordingly

MICROPROCESSOR APPLICATION IN AUTOMOBILES SECTOR (OEC –ECE-453G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Explain the architecture, pin configuration of various microprocessors and Interfacing devices .

MANAGEMENT INFORMATION SYSTEMS (HSMC-10G)

Course Outcome (CO)	Details of Course Outcomes

(CO1)	Understand the leadership role of Management Information Systems in achieving business competitive advantage through informed decision making.
(CO2)	Analyze and synthesize business information and systems to facilitate evaluation of strategic alternatives.
(CO3)	Effectively communicate strategic alternatives to facilitate decision making.

WORKSHOP LAB-IV (LC-ME -402G)

Course Outcome (CO)	**Details of Course Outcomes**
(CO1)	Principle of automobiles drive and advances in automobiles.
(CO2)	Various types of clutch.
(CO3)	Various types of steering system along with merits and demerits.
(CO4)	Various type of hybrid vehicles.
(CO5)	Hydrogen based technology for pollution control